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EXAMINER

PHU, SANH D

ART UNIT PAPER NUMBER

2682

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,437

Applicant(s)

SATO, YUKIO

Examiner

Sanh D Phu

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18 is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/9/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This Office Action is responsive to the Amendment filed on 7/09/04.

Claim Rejections – 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Kanbara et al (6,516,201).

Regarding to claim 1, see Fig.1, col. 3, line 15 to col. 5, line 6, Kanbara et al disclose a multi-mode cellular phone terminal comprising:

radio communications means connected to an antenna for transmitting (TX)/receiving (RX) radio waves (see Fig. 1, col. 3, line 22 to col. 4, line 33);

signal processing means for transmitting/receiving a transmit/receive signal to/from said radio communications means (see Fig. 1, col. 3, line 22 to col. 4, line 33); and

communications control means for controlling said radio communications means and said signal processing means, said multi-mode cellular phone terminal supporting a plurality of communications systems (see Fig. 1, col. 3, line 22 to col. 4, line 33),

wherein said radio communications means is composed of hardware to be used in common by a plurality of communications systems, and said signal processing means is composed of hardware to execute signal processing supporting a plurality of communications systems (see Fig. 1, col. 3, line 22 to col. 4, line 33).

Regarding to claim 2, Kanbara et al disclose that a multi-mode cellular phone terminal wherein said signal processing means can support a plurality of different data rates and modulation systems by using the same

Art Unit: 2682

communications control system (see Fig. 1, col. 3, line 22 to col. 4, line 33 and col. 6, line 1-16).

Regarding to claim 3, Kanbara et al disclose that a multi-mode cellular phone terminal wherein communications control means can support different communications control systems and that said signal-processing means can support different data rates and modulation systems (PN code and converted to the predetermine data format in accordance with a data rate) (see Fig. 1, col. 3, line 22 to col. 4, line 33 and col. 6, line 1-16).

Regarding to claim 6, Kanbara et al disclose that a multi-mode cellular phone terminal wherein said signal processing means (6) executes modulation/demodulation supporting a plurality of communications systems and has a signal processor (6,7,8) composed of common hardware (40,42,21) and memory (41) storing a plurality of signal processing programs (see Fig. 1, col. 3, line 22 to col. 4, line 33).

Regarding to claim 7, Kanbara et al disclose that a multi-mode cellular phone terminal wherein said signal processing means (6,7,8) executes modulation/demodulation supporting a plurality of communications systems

Art Unit: 2682

and has a signal processor composed of common hardware and memory storing a plurality of signal processing programs (see Fig. 1, col. 3, line 22 to col. 4, line 33).

Regarding to claim 8, Kanbara et al disclose that a multi-mode cellular phone terminal wherein said signal processing means has a signal processor composed of common hardware and read/write memory storing the minimum signal processing programs to support each communications system (see Fig.1, col. 4, line 38 to col. 5, line 6).

Regarding to claim 9, Kanbara et al disclose that a multi-mode cellular phone terminal wherein said signal processing means has a signal processor composed of common hardware and read/write memory storing the minimum signal processing programs to support each communications system (see Fig.1, col. 4, line 38 to col. 5, line 6).

Regarding to claim 10, Kanbara et al disclose that a multi-mode cellular phone terminal wherein said communications control means has a controller (40) supporting a plurality of communications systems and memory storing

Art Unit: 2682

control programs supporting the multi-mode (see Fig.1, col. 4, line 38 to col. 5, line 6).

Claim Rejections – 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 5, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanbara et al in view of Ohbichi et al (5,585,617).

Regarding to claim 4 and 5, Kanbara et al disclose data modulation/demodulation is based upon format corresponding to data rate of signal processor (6,7,8) (see Fig. 1, col. 4, lines 1-29)

He does not disclose a clock having a frequency necessary for modulation/demodulation at a plurality of different data rate is generated by

frequency division means via different dividing number or fractional frequency division of a reference clock output from a single oscillator.

Ohbichi discloses a clock generator (12, 13, 14) for generating a clock with desired frequency rates wherein the clock is generated by frequency division means (14) making integral frequency division via different dividing number or fractional frequency division of a common reference clock output from a single oscillator (13) (see figure 2, col. 4, lines 56–65).

Since in Kanbara et al, said signal processing means can support different bit rates (see col. 4, lines 1–16) and Kanbara et al does not disclose in detail how said different bit rates are generated. Therefore, for an application, it would have been obvious for a person skilled in the art, when building or carrying out Kanbara et al invention, to implement a clock generator for generating a clock with desired frequency rates for supporting said different bit rates wherein the clock is generated by frequency division means (14) making integral frequency division via different dividing number or fractional frequency division of a common reference clock output from a single oscillator, as taught by Ohbichi.

Regarding to claims 11 and 12, Kanbara et al, in view of Ohbichi, discloses a system timer (Swa1, .., Swan) for switching over a plurality of clocks generated by said frequency division means and counting different timings for generating the clock at a desired frequency in a capability of supporting said plurality of communication systems (see Ohbichi, figure 2).

Allowable Subject Matter

6. Claims 13-18 are allowed.

Response to Arguments

7. Applicant's arguments filed on 8/26/04 have been fully considered but they are not, in part, persuasive.

The rejections, under 35 USC 112, second paragraph, to claims 4 and 5, are now withdrawn since the claims were amended to overcome the rejection.

The Objections, under Allowable Subject matter, to claims 13-18, are now withdrawn since the claims were amended to overcome the objections.

The applicant's argument, with respect to the rejection, under 35 USC 102(e) to claims 1-3 and 6-10, and under 35 USC 103(a) to claims 4, 5, 11 and 12, are not persuasive.

The applicant mainly argues that:

(a) With respect to claim 1, Kanbara et al does not teach or disclose the limitation "said multi-mode cellular phone terminal supporting a plurality of communications systems, wherein said radio communications means is composed of hardware to be used in common by a plurality of communications systems, and said signal processing means is composed of hardware to execute signal processing supporting a plurality of communications systems";

(b) With respect to claims 6 and 7, Kanbara et al does not teach or disclose the limitation "said signal processing means executes modulation/demodulation supporting a plurality of communications systems";

(c) With respect to claim 10, Kanbara et al does not teach or suggest the limitation "said communications control means has a controller supporting a plurality of communications systems"; and

(d) With respect to claims 4, 5, 11 and 12, there is no motivation to combine Kanbara et al with Ohbichi to arrive at the claimed invention.

Regarding to part (a), the examiner respectfully disagrees. Note that the rejections are based on the limitations given in the claims. As per claim 1, Kanbara et al discloses a multi-mode cellular phone terminal (see figure 1) which supports a plurality of communication system comprising a voice communication system (9, 10, 12, 11) for a voice communication and a data communication system (20, 50, PC) for a data communication, wherein said multi-mode cellular phone terminal comprises a radio communications means, composed of hardware (3-5) to be used in common by said plurality of communications systems, and a signal processing means (6-8) is composed of hardware to execute signal processing supporting a plurality of communications systems. Claim 1 does not have other limitations to make the "multi-mode cellular phone terminal" distinguishable from Kanbara et al multi-mode cellular phone terminal.

Regarding to part (b), the examiner also disagrees. See figure 1, Kanbara et al discloses that the signal processing means (6-8) executes

modulation/demodulation (CDMA orthogonal modulation/demodulation, PCM) supporting said plurality of communications systems (see col. 3, lines 35–53).

Regarding to part (c), the examiner also disagrees. See figure 1, Kanbara et al discloses a communication control means (40–42) which has controller (40) supporting said plurality of communications systems.

Regarding to part (d), the examiner also disagrees. As per claims 4 and 5, Kanbara et al does not disclose the limitation “a clock having a frequency necessary for modulation/demodulation at a plurality of different bit rates is generated by frequency division means for making integral frequency division via different dividing number or fractional frequency division of a common reference clock output from a single oscillator”. Ohbichi discloses a clock generator (12, 13, 14) for generating a clock with desired frequency rates wherein the clock is generated by frequency division means (14) making integral frequency division via different dividing number or fractional frequency division of a common reference clock output from a single oscillator (13) (see figure 2, col. 4, lines 56–65). Since in Kanbara et al, said signal processing means can support different bit rates (see col. 4, lines 1–16) and

Art Unit: 2682

Kanbara et al does not disclose in detail how said different bit rates are generated. Therefore, for an application, it would have been obvious for a person skilled in the art, when building or carrying out Kanbara et al invention, to implement a clock generator for generating a clock with desired frequency rates for supporting said different bit rates wherein the clock is generated by frequency division means (14) making integral frequency division via different dividing number or fractional frequency division of a common reference clock output from a single oscillator, as taught by Ohbichi. And further, as per claims 11 and 12, Kanbara et al, in view of Ohbichi, discloses a system timer (Swa1, ..., Swan) for switching over a plurality of clocks generated by said frequency division means and counting different timings for generating the clock at a desired frequency in capability of supporting said plurality of communication systems (see Ohbichi, figure 2).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D Phu whose telephone number is (703)305-8635. The examiner can normally be reached on 8:00-16:30.


The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sanh D. Phu
Examiner
Art Unit 2682

SP


LEE NGUYEN
PRIMARY EXAMINER